Nan Jiang

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Education

M.S. Electrical Engineering

Intelligent Systems, Robotics and Control
2016 – present
UC San Diego

B.S. Electrical Engineering

Electronic Circuits & Systems
2012 – 2016
UC San Diego
Major GPA: 3.757 / 4.0
Cum GPA: 3.656 / 4.0
Cum Laude Honors
Provost Honors

Skills

Circuit Design

- OrCad PSpice
- Cadence Tools
- Simulink
- Verilog
- Circuit Test in Laboratory

Computer Software

- MATLAB
- Python
- C++
- OpenCV
- OpenGL
- Unity3D
- Blender
- Vuforia(AR)

Research

April 2016 - present, Video Processing Lab, UCSD
(C++/Python/OpenCV/Blender)
-Researched on Hand Pose Detection based on Convolutional Neural Network.
-Researched on Hand Segmentation with Multiple Background and Various Hand Gestures.

Aug 2016 - Feb 2016, Institute of Automation, Chinese Academy of Sciences
(MATLAB, SVM)
-Served as the team leader in the project of License Plate Number Recognition.
-Located the car plate from various background and implemented character recognition using template matching and SVM

Selected Projects

Transimpedance Amplifier Design
(OrCAD)
Given the architecture of the circuit, design the size of all MOSFETS and resistors to meet the requirements of small signal gain, bandwidth range, common-mode output range and power consumption minimization.

Registered 4-operand and 8-bit unsigned Adder
(Verilog, Design Compiler, Cadence)
The design consisted of Carry-Lookahead adders and was optimized for fast performance without making significant trade-off with power consumption or layout area.

Pattern Recognizing Image Processing
Sponsor: Image Informatics LLC (Alumni)
(MATLAB, Non-linear least squares)
Applied an algorithm to Medical Imaging Informatics, which could find periods, orientation and location of repeating elements.

Rubik's Cube AR Solving Assistant [Master thesis]
(Python, OpenCV, Unity3D, Vuforia)
This project is designed as an assistant for players to solve the Rubik's cube in a 3D AR environment. Player can see the instructions rendered on their cube at real time such as which side and which direction to turn.